DOCUMENT RESUME

ED 273 269 IR 012 284

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TITLE CAD/CAM (Computer Aided Design/Computer Aided Manufacture). A Brief Guide to Materials in the Library of Congress.
INSTITUTION Library of Congress, Washington, D.C.
PUB DATE Jul 85
NOTE 10p.; LC Science Tracer Bullet.
PUB TYPE Guides - Non-Classroom Use (055) -- Reference Materials - Bibliographies (131)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Computer Graphics; *Computer Oriented Programs; Conference Proceedings; Design; Engineering; *Information Services; *Information Sources; Manufacturing; Microcomputers; Periodicals; Programing; *Reference Materials; State of the Art Reviews
IDENTIFIERS *Computer Assisted Design; *Computer Assisted Manufacturing

ABSTRACT

This brief guide to materials in the Library of Congress (LC) on computer aided design and/or computer aided manufacturing lists reference materials and other information sources under 13 headings: (1) brief introductions; (2) LC subject headings used for such materials; (3) textbooks; (4) additional titles; (5) glossaries and handbooks; (6) bibliographies; (7) state-of-the-art reviews and conference proceedings; (8) abstracting and indexing services; (9) journals that often contain relevant articles; (10) selected representative journal articles; (11) report indexes; (12 selected pamphlets and other vertical file materials; and (13) additional sources of information. (DJR)

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ISSN 0090-5232

CAD/CAM
(Computer Aided Design/Computer Aided Manufacture)
A Brief Guide to Materials in the Library of Congress
Updated by George D. Havas

TB 85-7 July 1985

BRIEF INTRODUCTIONS

Hudson, C. A. Computers in manufacturing. Science, v. 215, Feb. 12, 1982: 818-825. Q1.S35 and Pamphlet box*

Reviews the use of computers in manufacturing applications including computer aided design, computer aided manufacturing and robotics.

Yankee, Herbert W. Computer-aided design and manufacturing. In McGraw-Hill encyclopedia of science & technology. v. 3. New York, McGraw-Hill, 1982. p. 490-492. Q121.M3 1982*

SUBJECT HEADINGS used by the Library of Congress, under which books on CAD/CAM can be located in most card, book, and online catalogs include the following:

CAD CAM SYSTEMS (Highly relevant)
COMPUTER-AIDED DESIGN (Highly relevant)
ENGINEERING DESIGN--DATA PROCESSING (Highly relevant)
PRODUCTION ENGINEERING--DATA PROCESSING (Highly relevant)
PRODUCTION MANAGEMENT--DATA PROCESSING (Highly relevant)
STRUCTURAL DESIGN--DATA PROCESSING (Highly relevant)
COMPUTER GRAPHICS (Relevant)
ARTIFICIAL INTELLIGENCE (Related)
INTERACTIVE COMPUTER SYSTEMS (Related)

TEXTS

Besant, C. B. Computer-aided design and manufacture. 2nd ed. Chichester, Eng., Horwood; New York, Halsted Press, 1983. 232 p. TA174.B46 1983

CAD/CAM, computer-aided design/computer-aided manufacturing. New York, Engineering Information, c1983. 168 p. TS155.6.C33 1983

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LR012284

Faux, I. D., and M. J. Pratt. Computational geometry for design and manufacture. Chichester, Eng., Horwood; New York, Halsted Press, 1979. 329 p. QA447.F33
Bibliography: p. 315-324.

Gunn, Thomas G. Computer applications in manufacturing. New York, Industrial Press, c1981. 204 p. TS155.G924
Glossary: p. 183-198.

Halevi, Gideon. The role of computers in manufacturing processes. New York, Wiley, c1980. 502 p. TS176.H33
Includes bibliographical references and index.

Harrington, Joseph, Jr. Computer integrated manufacturing. Huntington, N.Y., R. E. Krieger Pub. Co., 1979, c1973. 321 p. TS155.H295 1979
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Hulbert, Lewis Eugene, and Robert L. Heilman. Interactive computer graphics: a spectrum of systems for better design at lower costs. Columbus, Ohio, Battelle Memorial Institute, c1978. 20 p. (Battelle technical inputs to planning, rept. no. 10) T385.H84
Includes bibliographical references.

Krouse, John K. What every engineer should know about computer-aided design and computer-aided manufacturing: the CAD/CAM revolution. New York, M. Dekker, c1982. 147 p. (What every engineer should know, v. 10) TA174.K76 1982*

Pao, Y. C. Elements of computer-aided design and manufacturing, CAD/CAM. New York, Wiley, c1984. 498 p. TS155.6.P36 1984*

ADDITIONAL TITLES

Advances in CAD/CAM: case studies. Edited by Peter C. C. Wang. Boston, Kluwer Academic Publishers, c1984. 209 p. TS155.6.A38 1984
"Contains some of the paper[s] ... presented at the Fifth Automation Technology Conference held in Monterey, California."

Carberry, Patrick R. CAD/CAM with personal computers. Blue Ridge Summit, Penn., Tab Books, c1985. 185 p. TS155.6.C38 1985
"No. 1852."

Chasen, Sylvan H., and J. W. Dow. The guide for the evaluation and implementation of CAD/CAM systems. 2d ed. Atlanta, CAD/CAM Decisions, c1983. 461 p. TS176.C455 1983

Computer-aided process plant design. Edited by Michael E. Leesley. Houston, Gulf Pub. Co., c1982. 1378 p. TP155.5.C59 1982
Includes bibliographies and index.

Groover, Mikell P., and Emory W. Zimmers, Jr. CAD/CAM: computer-aided design and manufacturing. Englewood Cliffs, N.J., Prentice-Hall, c1984. 489 p. TS155.6.G76 1984*

Prince, M. David. Interactive graphics for computer-aided design. Reading, Mass., Addison-Wesley Pub. Co., c1971. 301 p. T385.P75
Bibliography: p. 185-187.

Programming techniques in computer aided design. Edited by M. A. Sabin. London, NCC Publications, 1974. 316 p. TA174.P74
Bibliography: p. 305-316.
"Proceedings of two conference organized by the British Computer Society."

Ryan, Daniel L. Computer-aided graphics and design. New York, M. Dekker, c1979. 324 p. T385.R9
Includes bibliographies and index.

Smith, Donald N., Lester V. Colwell, and Richard Wilson. CAD/CAM international Delphi forecast: conducted in the United States, Japan, and the United Kingdom. Dearborn, Mich., Society of Manufacturing Engineers, c1980. 181 p. TA174.S69

Turnkey CAD, CAM computer graphics: a survey and buyer's guide for manufacturers. Cambridge, Mass., Daratech Associates, c1980-1982. 3 pts. TA174.T9 and Pamphlet box*
Contents: pt. 1. Contemporary interaction CAD/CAM technology.--pt. 2. Evaluating today's turnkey systems.--pt. 3. U.S. directory of vendors.
Includes bibliographical references and indexes.

GLOSSARIES, HANDBOOKS

Allan, John J. The CAD/CAM glossary. Editors: Richard M. Mueller, Anthony M. Chiu. 3d ed. Dallas, Productivity International, 1979. 203 p. TA174.A44 1979*

CAD/CAM: design and drafting systems, CAD/CAM systems, graphics systems, NC tape prep, software packages, CRTs, workstations, plotters and printers, digitizers. Dearborn, Mich., Society of Manufacturing Engineers, Marketing Services Division, c1983. 590 p. TS155.6.C34 1983*

CAD/CAM handbook. Eric Teicholz, editor-in-chief. New York, McGraw-Hill, c1985. 1 v. TS155.6.C36 1985*

Computer graphics, CAD and CAD/CAM: product guide and suppliers' directory, 1982. Richmond, Surrey, Eng., Interco Business Consultants; New York, Frost & Sullivan, c1982. 2 v. T385.C573 1982

A Glossary of terms for computer integrated manufacturing. Dearborn, Mich., Computer and Automated Systems Association of SME, c1983. 439 p. TS155.6.G56 1983

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Includes bibliographical references. TA174.A66 1975

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Includes bibliographical references.

----- Proceedings of CAM-I's seventh annual meeting of members ... Dallas, Texas, November 7-9, 1978. Arlington, Tex., Computer Aided Manufacturing-International, 1979. 119 p. TS176.C64 1979a

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European Conference on Computer Aided Design in Medium Sized and Small Industries, 1st, Paris, 1980. CAD in medium sized and small industries: proceedings of the First European Conference on Computer Aided Design in Medium Sized and Small Industries, MICAD 80, Paris, 23-26 September 1980. Edited by Jean Mermet. Amsterdam, New York, North-Holland Pub. Co.; New York, sole distributors for the U.S.A. and Canada, Elsevier North-Holland, c1981. 664 p. TA174.E89 1980
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International Conference on Computers in Engineering and Building Design, 3d, Brighton, Eng., 1978. CAD 78: Third International Conference and Exhibition on Computers in Engineering and Building Design, Metropole Centre, Brighton, Sussex, UK, 14-16 March 1978. Organized by the journal Computer aided design. Guildford, Eng., IPC Science and Technology Press, 1978. 803 p. TA174.I57 1978
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ABSTRACTING AND INDEXING SERVICES that index relevant journal articles and other literature are listed below. Some suggested terms are given as aids in searching.

Applied Mechanics Review (1948-) TA1.A63953*
See: Computer Aided Design
Computer Aided Manufacturing
Computer Graphics

Applied Science & Technology Index (1913-) Z7913.I7*
See: Computer Aided Design
Computer Aided Manufacture
Computer Graphics

Computer Abstracts (1957-) Z6654.C17C64*
See: Computer Aided Design
Computer Aided Manufacturing

Computer & Control Abstracts (Science Abstracts--Series C) (1966-) QA76.C548*
See: CAD
Computer Graphics

Note: Consult reference librarian for location of abstracting and indexing services in the Science Reading Room.

Computer Literature Index (1980-) QA76.Q3*
See: Computer Aided Design
Computer Aided Manufacturing
Graphics
Interactive Computing Applications

Current Technology Index (1962-) Z7913.B7*
See: cross references under Computer Aided Design
cross references under Computerized Numerically Controlled ...
Industrial Design, Computer Aided

Electrical & Electronics Abstracts (Science Abstracts--Series B) (1898) Q1.S3* and Z5833.E37*
See: CAD
Computer Graphics

Engineering Index (1884-) Z5851.E62*
See: Computer Aided Design
Computer Aided Manufacture

Robomatix Reporter (1983-) TS191.8.R588
See: CAD
CAD CAM
CAM

JOURNALS that often contain articles relevant to CAD/CAM are

Computer Aided Design TA174.C58
Computer Graphics T385.C56
Computer Graphics World T385.C558
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Curry, Carol K. Electronic CAD innovations. Computer graphics world, v. 7, Mar. 1984: 27-28, 32, 34, 36, 40. T385.C558

Gerwin, Donald. Do's and don'ts of computerized manufacturing. Harvard business review, v. 60, Mar./Apr. 1982: 107-116. HF5001.H3

Lipchin, Leonid. The role of strategic planning for productivity improvement through computer-aided engineering. In Compucon, 23rd, Washington, fall 1981. Productivity, an urgent priority; proceedings ... twenty-third IEEE Computer Society International Conference. New York, Institute of Electrical and Electronics Engineers, c1981. p. 203-212. QA76.6.C6276 1981

McCosh, Daniel F. Designer's delight: CAD comes of age. Ward's auto world, v. 18, Mar. 1982: 37-40. HD9710.U5W33

Teicholz, Eric. Choosing a turnkey CADD (computer aided design and drafting) system. Datamation, v. 28, Feb. 1982: 118-120, 122. T175.M26

Wang, T. L. Distributed system provides an ideal environment for full integration of CAD and CAM. IE Industrial engineering, v. 13, Nov. 1981: 106-110. T55.4.I2

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Government Reports Announcements & Index (1946-) Z7916.G78*
See: Computer Aided Design
Computer Aided Manufacturing

Monthly Catalog of United States Government Publications (1895-) Z1223.A18*
See: Engineering Design--Data Processing

SELECTED MATERIALS available in Science Reading Room pamphlet boxes include:

Adams, William. CAD combines analog and digital layout on switcher PCB. Computer design, v. 20, Nov. 1981: 131-135.

CAD/CAM goes solid. In Science now. New York, Arco Pub., 1984. p. 56-61.

Computer-aided design: helping create the complex products of the space age. Aviation week & space technology, v. 115, Nov. 1981: 75-76, 80.

Engel, Kenneth. Shadows of the 4th dimension. Science 80, v. 1, July/Aug. 1980: 68-73.

Godfrey, David E. Gearing up to the factory of the future. Aerospace America, v. 23, Jan. 1985: 88-91.

Kinnucan, Paul. Computer-aided manufacturing aims for integration. High technology, v. 2, May/June 1982: 49-56.

Jackson, Richard H. CAD/CAM integration: the imperatives. Aerospace America, v. 23, Jan. 1985: 102-103.

Machover, Carl, and Robert E. Blauth. CAD/CAM handbook. Bedford, Mass., Computervision Corp., 1980. 306 p.

New kids on the engineering block. Vectors, v. 22, spring 1980: 3-5.

Schefter, Jim. Planes, tools, even chairs ... designed by computer. Popular science, v. 218, Feb. 1981: 90-94.

Stiefel, Malcolm L. CAD/CAM spells productivity. Mini-micro systems, v. 14, July 1981: 115-122.

ADDITIONAL SOURCES OF INFORMATION

IEEE Computer Society
10662 Los Vaqueros Circle
Los Alamitos, California 90720
Telephone: (714) 821-8380

National Computer Graphics Association
8401 Arlington Blvd.
Suite 601
Fairfax, Virginia 22031
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Society of Manufacturing Engineers
P.O. Box 930
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For the names and addresses of other organizations, call or write to

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